REMARKS

In the Office Action, the Examiner reviewed claims 1-46 of the above-identified US Patent Application, with the result that independent claims 1 and 24 and their dependent claims 2-14 and 25-37 were rejected under 35 USC §§112 and 103, and independent claims 15 and 38 and their dependent claims 16-23 and 39-46 were allowed. In response, Applicants have amended the claims as set forth above. More particularly:

Independent method claim 1 and independent apparatus claim 24 have been amended to incorporate limitations of their respective dependent claims 4, 6, 7, 27, 29 and 30, namely, to require steps/means (12) of taking an IP packet from the common buffer (28), detecting whether the IP packet is a TCP connection request packet or is associated with an existing TCP connection, wherein the latter is immediately sent to the servers (20) while the former is rejected unless the IP packet is necessary to meet the minimum TCP connection rate for the customer associated with the TCP connection request or if sending the IP packet to the servers (20) does not prevent meeting the minimum TCP connection rate for another of the customers. Support for these amendments can also be found in Applicants' specification at page 9, lines 3-20.

Dependent claims 4, 6, 7, 27, 29 and 30 have been canceled without prejudice to Applicants.

Dependent claims 5, 8 and 9 have been amended to depend directly from their parent claim 1.

Dependent claims 28, 31 and 32 have been amended to depend directly from their parent claim 24.

Dependent claims 13, 14, 36 and 37 have been amended to correspond to the amendments to their parent claims 1 and 24, respectively.

Applicants believe that the above amendments do not present new matter. Favorable reconsideration and allowance of remaining claims 1-3, 5, 8-26, 28, and 31-46 are respectfully requested in view of the above amendments and the following remarks.

Rejections under 35 USC §112, Second Paragraph

Claims 1-14 and 24-37 were rejected under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that Applicants regard as their invention. Applicants respectfully request favorable reconsideration in view of the following comments.

Independent claims 1 and 24 and their respective dependent claims 2-14 and 25-37 were rejected under 35 USC §112, second paragraph, on the basis that "it is not seen how controlling flow of the incoming workload from the common buffer to the plurality of servers would provide at least the minimum TCP connection rate as set forth

in the so as clause." Claim 4 was further rejected because "[i]t is not seen how the step recited therein would satisfy the so as clause in parent claim 1." Finally, the Examiner noted that dependent apparatus claim 29 is improperly recited as depending from method claim 4 instead of properly depending from apparatus claim 24.

In response, Applicants have amended independent claims 1 and 24 to incorporate additional details as to how the flow of incoming workload is controlled, including the step/means by which the minimum TCP connection rate is provided for. The rejections of claims 4 and 29 have been rendered moot by the cancellation of these claims.

In view of the above, Applicants respectfully request withdrawal of the rejections under 35 USC §112.

Rejection under 35 USC §103

Independent claims 1 and 24 and their remaining dependent claims 2, 3, 5, 8-14, 25, 26, 28, and 31-37 were rejected under 35 USC §103(a) as being unpatentable over U.S. Patent No. 6,442,588 to Clark et al. (Clark) in view of U.S. Patent No. 6,438,551 Holmskär. Applicants respectfully traverse this rejection in view of the following comments.

Applicants' invention is directed to a system (10) and method for controlling the rates at which application workload (TCP connection requests) (14) is admitted to a

collection of servers (20), such as a server farm of an application service provider (ASP) that hosts Internet World Wide Web (WWW) sites of various owners. The system (10) and method operate in an environment in which each customer has a workload-based Service Level Agreement (SLA) for each type of application hosted by the provider and used by the customer. As such, the system (10) and method of the invention are intended to support (minimum, maximum) TCP connection requests for multiple customers and applications.

According to the invention, the system (10) and method make use of a workload regulator (12) that operates by regulating only new TCP connection request packets while transparently passing other IP packets (e.g., packets associated with existing TCP connections). The flow of new TCP connection requests is regulated by the regulator (12) in a manner that guarantees a level of service previously agreed to each customer (per their respective SLA's). A new TCP connection request is admitted if necessary to provide the guaranteed rate for a particular application of a given customer or if the server farm has unused resources available to process related applications. Otherwise, a new TCP connection request is dropped (or rejected).

Under the §103 rejection, the Examiner explained that Clark discloses

> a system having an OSP (online service provider) server complex 222 and DFF 210 (dynamic filter firewall). All TCP connection requests are screened by the DFF for limiting the number of requests to the sever.

The Examiner applied Holmskär for teaching "controlling the flow of requests from the buffer to the central processor (see lines 8-14 of column 4) so as to provide at least the minimum access rate." With respect to dependent apparatus claims 4 and 5 (and presumably likewise, dependent method claims 27 and 28), the Examiner further explained that "it is well known that communication via network is in packets. Clark teaches using Internet for communication." Finally, with respect to dependent apparatus claims 6-10 (and presumably likewise, dependent method claims 29-33), the Examiner explained that "it is obvious that the rate can be controlled by either decrease or increase [sic] the number of requests permitted to be transferred from the buffer to the server in Clark."

The Examiner's remarks regarding claims 4, 6 and 7 are pertinent to the §103 rejection as a whole because the limitations of these claims have been incorporated into their respective independent parent claims.

With respect to claim 4, the Examiner's argument does not address the limitation in claim 4 (now incorporated into claim 1) that "the controlling step is performed by detecting whether an IP packet is a TCP connection request packet, and immediately admitting all other packets." Neither Holmskär nor Clark suggest a control approach in which existing TCP connections are freely admitted. At best, Holmskär discloses that "the load regulation function for the central processor CP stops to distribute new call connection requests as well as other job requests." As such,

Holmskär regulates both new and existing connection requests, and therefore teaches away from Applicants' control approach that freely admits existing TCP connection requests.

With respect to claims 6 and 7, the Examiner's argument does not address the limitation in claim 6 (now incorporated into claim 1) that "IP packets associated with TCP connection requests are admitted if necessary to meet the minimum TCP connection rate for the customer associated with the TCP connection request," and does not address the limitation in claim 7 (now incorporated into claim 1) that "IP packets associated with a TCP connection request of one of the customers are also admitted if doing so does not prevent meeting the minimum TCP connection rate for another of the plurality of customers." The Examiner's argument improperly addresses only the result of the step, instead of the specific process/means by which the result is obtained. Neither Holmskär nor Clark suggests a control approach in which new TCP connections are admitted if one of the conditions of claim 6 or 7 is met.

In view of the above, Applicants believe that Holmskär cannot be said to supplement the teachings of Clark in order to arrive at Applicants' method of independent claim 1, and likewise Applicants' apparatus of independent claim 24. As such, Applicants believe that the combination of Clark and Holmskär fails to teach or suggest Applicants' claimed approach for regulating admittance of TCP connection requests to provide at least minimum TCP connection rates for customers, and therefore

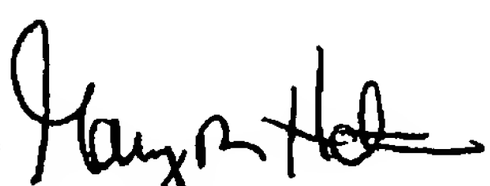
Applicants respectfully request withdrawal of the rejection to the claims under 35 USC §103(a).

Closing

For all of the above reasons, Applicants believe that the claims define patentable novelty over all the references, alone or in combination, of record. It is therefore respectfully requested that this patent application be given favorable reconsideration.

Should the Examiner have any questions with respect to any matter now of record, Applicants' representative may be reached at (219) 462-4999.

Respectfully submitted,

By 
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